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Two New Species of Fishes (Gymnotidae, Loricariidae) from Caripito, Venezuela.[1]

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(Plate I; Text-figures 1-2).

[This is a contribution from the Forty-third or Venezuelan Expedition of the Department of Tropical Research of the New York Zoological Society made under the direction of Dr. William Beebe. The expedition was sponsored by grants from the Committee for Inter-American Artistic and Intellectual Relations and from four trustees of the Zoological Society, George C. Clark, Childs Frick, Laurance S. Rockefeller and Herbert L. Satterlee, and by invaluable assistance from the Standard Oil Companies of New Jersey and Venezuela. For maps and ecological data, see *Zoologica*, Vol. XXVIII, No. 9, pp. 53-59, 1943.]

Dr. William Beebe, Director, Department of Tropical Research, New York Zoological Society, kindly loaned to me for study his collections made during 1942 in the region of Caripito, Venezuela, and I take this opportunity to express my thanks to him for the privilege of studying these specimens.

Among this interesting lot of fishes I found what I consider to be two new species. The first one described belongs to the family Gymnotidae, and to the not well known genus *Hypopomus* Gill. The second species belongs to the family Loricariidae and was received too late to include in my recent publication entitled "The Catfishes of Venezuela, with descriptions of thirty-eight new forms," *Proceedings of the United States National Museum*, vol. 94, pp. 173-338, figures 1-5, plates 1-14, 1944.

No doubt when more extensive collecting is done in the Caripito region of Venezuela additional undescribed species of fishes will be found.

Family *Gymnotidae*.

Genus **Hypopomus** Gill.

Hypopomus Gill, *Proc. Acad. Nat. Sci. Phila.*, p. 152, 1864. Genotype: *Rhamphichthys mulleri* (Kaup).

After examining the material in the national collections along with 4 specimens collected by Dr. William Beebe at Caripito, Venezuela, and comparing these with figures and descriptions of the already described species, considerable doubt must be cast on the identifications made by Ellis in his review of the family Gymnotidae and by Eigenmann in his British Guiana fishes, since both accounts are identical with but few exceptions. The specimens from Caripito have a very bluntly rounded snout and shorter head and the pore above the posterior nostril differs in position when compared with forms from other localities. Unfortunately, Kaup did not show the position of that pore in reference to the posterior nostril, but his measurements of, and his figure of, *artedi* indicate that this species has a pointed snout with the rear margin of the eye behind the middle of the length from snout to occiput, while in other forms it is an equal distance as shown in figures and in the specimens before me. Steindachner's figure of *brevirostris* fortunately shows the position of the pores in reference to the posterior nostril and these are the same as in the specimens that I am referring to *occidentalis* Regan from Panama and the Maracaibo Basin, but the species must be different since *brevirostris* has 259 or 260 anal rays instead of fewer than 240 in the other species. Because of the above differences, it appears probable that the specimens from Caripito represent an undescribed species, while those from the Maracaibo Basin are so close to those from Panama that I identify them as the same form. Measurements made on available specimens are recorded in Table I.

KEY TO THE SPECIES OF *Hypopomus* GILL.

1a. Anal rays about 259 or 260; the pore above the posterior nostril (see Text-figs. 1 and 2) lies behind a vertical line through the rear edge of the posterior nostril and this pore is more remote from nostril than nostril is from the edge of the eye; tail behind the anal fin

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rounded, tapering to a point and length of tail is contained about 4 times in the total length; distance from posterior nostril to eye contained about 10 to 15 times in snout to occiput; rear margin of eye near middle of length from tip of snout to occiput. (Río Guaporé).....*Hypopomus brevirostris* (Steindachner)

1b. Anal rays fewer than 240, usually from 204 to 238.

2a. Rear margin of eye at least one-half to an eye diameter behind middle of length of distance from snout to occiput; snout contained 2½ to 3 times in the head and about 1 2/3 in postorbital length of head; distance from posterior nostril to eye contained about 15 times in length from sncut to occiput; pore above the posterior nostril lies behind a vertical line through rear edge of nostril. (Río Mona, French Guiana).....*Hypopomus artedi* (Kaup)[2]

2b. Rear margin of eye midway between tip of snout and occiput; snout contained more than 2 times in postorbital length of head.

3a. Distance from posterior nostril to eye contained from 9 to 14 times in length from snout to occiput; the pore above the posterior nostril lies behind a vertical line through rear of nostril or this line bisects the pore (Text-fig. 2), the latter is separated from the nasal opening by an isthmus of skin; tail behind anal compressed and ending rather abruptly, not gradually tapering to a rounded point and contained about 5 to 6 times in the total length; snout 2 1/5 to 2 1/3 into postorbital length of head. Río Condoto; Panama; Maracaibo Basin).....*Hypopomus occidentalis* Regan.

3b. Distance from posterior nostril to eye contained about 25 to 32 times in distance from snout to occiput; the pore above posterior nostril lies close to margin of that nostril and is bisected by a line through middle of posterior nostril or the pore is just in front of this line (Text-fig. 1); snout very bluntly rounded, 2½ to 2 4/5 times in postorbital length of head; tail very little compressed, tapering to a point and contained about 5 1/3 to 6 times in total length. (Caripito, Venezuela). *Hypopomus beebei* new species.

[2] *Rhamphichthys mulleri* Kaup is referred to this species as a synonym. I have examined a specimen of *artedi* (I. U. No. 12620) kindly loaned by Dr. J. L. Kask, California Academy of Sciences, and refer it to this species.

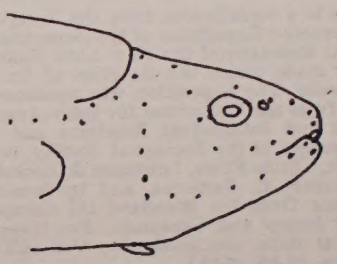
***Hypopomus beebei*, new species.**

Text-fig. 1; Plate 1, Fig. 4.

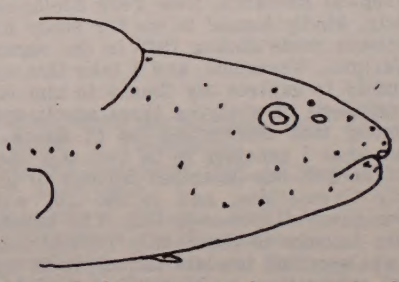
Holotype: U.S.N.M. No. 120753, a specimen, 136 mm. in total length and 112 mm. from snout tip to end of anal fin, collected by Dr. William Beebe at Caripito, Venezuela, during 1942.

Paratypes: Three specimens, 129 and 150 mm., the other specimen with tail broken off, taken along with the holotype and bearing same data (Cat. No. 30,040 in the collections of the Department of Tropical Research, New York Zoological Society).

Description: The holotype and 2 paratypes were measured, and these data, along with that recorded for other species, are presented in Table I.



TEXT-FIG. 1. Arrangement of pores on head of *Hypopomus beebei.*



TEXT-FIG. 2. Arrangement of pores on head of *Hypopomus occidentalis.*

Body compressed, tail slightly compressed and tapering to a point; head bluntly rounded; snout short, about equal to interorbital space, contained about 4 1/5 times in head; jaws without teeth; length of pectoral fin 2 in head; lateral line straight, the 3 rows of scales below and about 4 rows above enlarged; scales along back and ventrally on body much smaller in size; head a trifle longer than greatest depth; origin of anal fin about opposite tips of pectorals; anal papilla present, its base under middle of opercle or a vertical line

TABLE I. Counts and Measurements Made on Species of *Hypopomus*, Expressed in Hundredths of the Length from Snout Tip to End of Anal Fin.

	beebei			*occidentalis*		*artedi*	*brevirostris*
Characters	Holotype	Paratype	Paratype	Maracaibo Basin		after Kaup	after Steindachner's figure
Length to end of anal fin in millimeters	112.	106.	124.	100.	137.	244.	252.
Length of anal fin base	83.0	84.0	83.9	85.0	81.7	.....	86.5
Length of head	12.1	12.3	11.7	13.1	12.4	13.5	11.7
Length of snout	3.21	3.11	3.06	4.0	3.87	5.12	2.78
Greatest depth	11.06	11.8	9.68	12.0	13.1	9.30	9.33
Width of interorbital space	3.03	3.30	3.14	3.00	2.72	.....	.....
Postorbital length of head	8.48	8.20	8.14	8.30	8.03	7.78	7.34
Snout to occiput	8.57	8.49	8.06	10.0	9.20	9.02	7.74
Diameter of eye	1.25	1.42	1.29	1.50	1.24	0.98	1.59
Distance from anterior to posterior nostril	2.23	2.08	2.26	2.70	2.12	.....	1.90
Distance from eye to posterior nostril	0.28	0.27	0.32	0.80	0.88	.....	0.56
Width of gill opening	2.41	2.73	2.58	2.70	3.22	.....	2.85
Snout to anus	8.48	9.34	8.14	9.50	8.61	7.10	8.92
Snout to anal origin	17.4	16.6	16.1	16.2	16.8	20.7	15.5
Anus to anal origin	9.64	7.83	8.39	7.50	8.39	.....	7.54
Snout to pectoral insertion	11.2	11.3	11.3	12.5	12.1	.....	11.7
Longest ray of pectoral fin	5.35	5.47	.....	6.20	5.84	5.29	5.36
Longest ray of anal fin	4.02	.....	.....	5.00	4.60	.....	3.77
Length of tail beyond anal fin	21.0	22.3	20.1	20.5	25.1	20.9	32.9
Width of head at eyes	4.46	5.19	4.92	4.30	3.87	.....	.....
Number of anal rays	214	228	217	204	223	220 or 223	259 or 260

through occiput passes through base of anal papilla; lower jaw very slightly shorter than upper; mouth terminal, small; cephalic canals and pores prominent; mucus pores numerous on head; gill opening extending a little above and below pectoral fin base and more or less enclosing it, except posteriorly; margin of eye not free; eye small, a little over two times in the interorbital space; interorbital space convex, about 3 times in distance from snout tip to occiput; fontanel present from between eyes to occiput.

Color: Body light brownish in alcohol with 17 narrow dark brown bars across sides to end of anal fin; sometimes an incomplete or broken bar occurs between most or all the nearly complete bars; pectoral fins and anal fin with numerous dark brown pigment specks; tail beyond anal fin with about 3 more brown bars more or less obscure or absent.

Named *beebei* in honor of Dr. William Beebe, collector of this new species, who so kindly loaned to me his fish specimens from Caripito, Venezuela.

Family *Loricariidae*.

Corymbophanes venezuelae, new species.

Text-fig. 2; Plate 1, Figs. 1-3.

Holotype: U.S.N.M., No. 120752, a specimen 72.5 mm. in standard length, 94.5 mm. total length, collected by Dr. William Beebe in the Río Caripe, Caripito, Venezuela, during 1942.

Paratype: A specimen 32.5 mm. in standard length, 45 mm. total length, collected with the holotype and bearing same data (Cat. No. 30064, in the collections of the Department of Tropical Research, New York Zoological Society).

Description: Detailed measurements were made on the holotype and paratype and these data, expressed in hundredths of the standard length, are recorded in Table II, along with comparative data taken from the photographs of *Corymbophanes andersoni* Eigenmann.

The following counts were made, respectively, for holotype and paratype: Dorsal rays I, 10; I, 9; anal rays ii, 4; ii, 5; pelvic rays I, 5-I, 5; pectoral rays I, 6-I, 6; I, 6-I, 6; branched caudal fin rays 14; 14; series of scutes along lower sides 24; 24; pores in lateral line 25; 25; plates in front of dorsal fin 4-3; 3-3; scutes between anal and caudal fins 11; 11; spinuels on preopercle 7 to 11; 2 hooked spines on interopercle.

Head depressed, body depressed forward, caudal peduncle a little compressed, triangular in cross section; rami of jaws long, the

TABLE II. Measurements, Expressed in Hundredths of the Standard Length, for Two Species of *Corymbophanes* Eigenmann.

Characters	*andersoni* From figures of type	*venezuelae* Holotype	*venezuelae* Paratype
Standard lengths in millimeters	86.	72.5	32.5
Width across base of pectorals	30.0	37.2	32.9
Greatest depth	20.4	18.6	18.2
Snout	19.6	24.3	21.8
Interorbital space	11.7	10.3	12.3
Diameter of the eye	3.83	4.96	6.46
Length of ramus of lower jaw	8.33	11.0	10.8
Distance from nostrils to snout tip	13.8	18.2	14.8
Distance from nostrils to eye	4.58	4.14	3.39
Greatest width of lower lip	7.92	7.86	7.08
Tip of snout to gill opening	.....	27.6	25.6
Tip of snout to occiput	?25.8	35.2	34.2
Distance from eye to rear of temporal plate	8.08	9.66	9.85
Length of caudal peduncle	28.8	24.1	27.1
Least depth of caudal peduncle	11.2	13.8	14.8
Length of first dorsal ray	19.7	20.7	26.2
Length of last dorsal ray	10.4	14.1	14.2
Length of pectoral spine	24.6	26.6	26.7
Length of upper caudal ray	26.7	21.4	28.6
Length of lower caudal ray	29.2	27.9	31.7
Length of longest anal ray	7.92	9.10	6.16
Snout to dorsal origin	45.0	46.9	44.6
Snout to anal origin	64.7	71.7	71.0
Anus to anal origin	.....	9.38	10.2
Length of base of dorsal fin	19.6	26.2	24.9

ramus of the lower jaw contained 0.9 and 1.0 times in the interorbital space; head (to end of temporal plate) 2.8 and 2.7, depth 5.5, both in standard length; eye 3½ and 4½ in snout; eye 4½ and 6 in head to end of opercle and 5 and 7½ to end of temporal plate; eye 1.5 and 1.7 in interorbital space; lips of oral disk papillate, the papillae larger near margin of upper lip; length of free portion of maxillary barbel about 2/3 eye diameter; ramus of upper jaw not quite as long as ramus of lower jaw; both jaws with numerous very fine teeth with bifid tips, the inner lobe longest; ventral surface naked from anal fin region forward; anterior portion of head from just in front of nostrils and eyes naked, but with small, firm, embedded nodules; this naked area extends along sides of head to include interopercle and base of opercle; interorbital space slightly convex and free of prickles except a few over orbit, top of head to occiput also free of prickles; predorsal scutes in 3 or 4 pairs; dorsal surface of head evenly convex; no ridges or grooves on the head; none of the plates is keeled on the head or sides of body; each side of dorsal fin base naked; adipose fin completely lacking and no ridge where this fin might be expected; origin of dorsal fin an eye diameter in front of a vertical line through pelvic insertion; insertion of pelvics a trifle closer to tip of snout than midcaudal fin base; first two or three branched rays of dorsal fin longest; caudal fin a trifle concave; lower lobe longest; margin of dorsal fin a little rounded; third branched ray of pelvics longest; a vertical line through origin of anal fin is a little closer to base of last dorsal ray than to its tip; pectoral fins reach to or just past pelvic base and pelvic fins just past anal fin base; the opercle and interopercle are separately movable, the latter with two hooked short spines, their bases covered by thick skin; there are from 7 to 11 small spinules on the opercle.

Color: Caudal and dorsal fins barred; general coloration in alcohol brownish. No black spots along base of dorsal fin or on upper or lower surfaces of the body.

Remarks: This new species, *Corymbophanes venezuelae*, is a *Chaetostoma* lacking an adipose fin. If certain other characters, when compared with various species referred to *Chaetostoma*, were not different, too, I would be inclined to refer it to that genus since certain species, as *Chaetostoma anomala*, occasionally lack an adipose fin. The chief difference between these genera, besides the adipose fin, is in the degree of nakedness of the snout and the backward extension of this naked area to include the interopercle and most of the opercle. In *Chaetostoma* usually not quite half the snout is naked, but in *Corymbophanes* the snout is naked all the way to the eyes and to the anterior margins of the nostrils. Another difference is the lack of prickles in *Corymbophanes* on the supraoccipital area forward to and including the interorbital space.

The two species now referred to this genus may be distinguished from each other by means of the following key:

1a. Dorsal rays I, 9 or I, 10; eye 1½ to 1¾ times in the interorbital space; length of base of dorsal fin much longer than distance to dorsal origin. (Río Caripe). *Corymbophanes venezuelae*, new species.

1b. Dorsal rays I, 7; eye in interorbital space 3; length of base of dorsal fin much shorter than eye to dorsal origin. (British Guiana) ..... *Corymbophanes andersoni* Eigenmann

EXPLANATION OF THE PLATE.

PLATE I.

Figs. 1, 2, 3. *Corymbophanes venezuelae*, new species. Holotype, U.S.N.M. No. 120,752. Standard length 72.5 mm. Río Caripe, near Caripito, Venezuela.

Fig. 4. *Hypopomus beebei*, new species. Holotype, U.S.N.M. No. 120753. Total length 136 mm. Caripito, Venezuela.

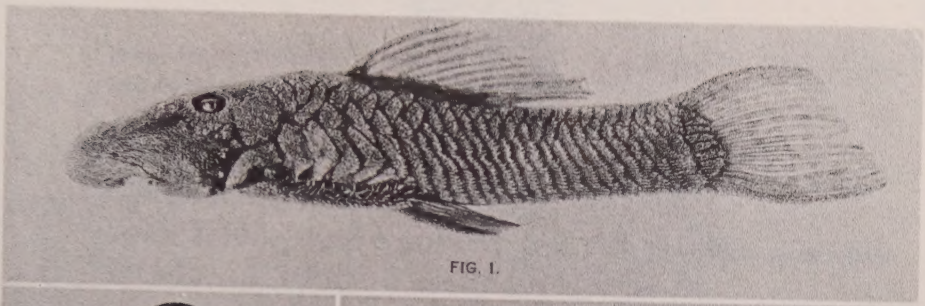


FIG. 1.

FIG. 2.

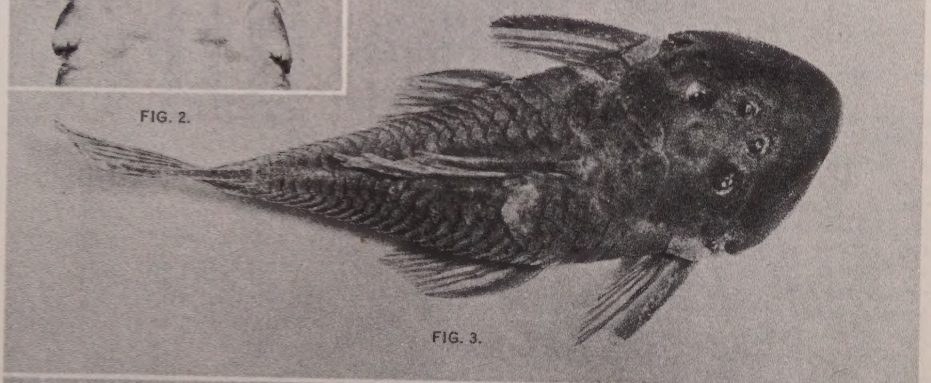


FIG. 3.

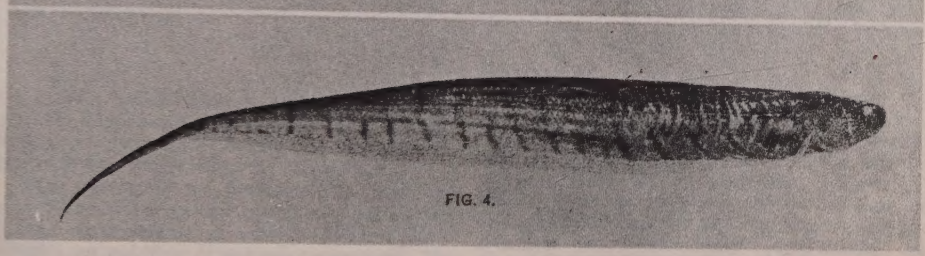


FIG. 4.

TWO NEW SPECIES OF FISHES (GYMNOTIDAE, LORICARIIDAE) FROM CARIPITO, VENEZUELA.